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ANGUIDS

Madrean Alligator Lizard

Elgaria kingii

Elgaria kingii is a robust, long-tailed alligator lizard from the south-western United States and north-western and western Mexico. It lives in desert, grassland, scrub and forest up to about 2,700 m and is active by day and at dusk. It lays eggs and needs a cool, dry to slightly moist enclosure with many hides and a cool winter rest. Its care is based on its close relatives.

Family: Anguidae Former name: *Gerrhonotus kingii*

KEY FACTS

THE ANIMAL

Adult size	**14 cm** snout-vent length
Lifespan	**15 years**
Active	**By day and at dusk**
Lifestyle	**Terrestrial**
Habitat	**Semi-desert and temperate woodland and meadow**
Difficulty	**Intermediate**

CARE

Min. enclosure	**100 × 50 × 60 cm** L × W × H for 1 adult
Temperature, day	**18-28 °C**
Basking spot	**30-33 °C**
Temperature, night	**12-16 °C**
Humidity	**40-60%**
Water	**Water dish**
UVB	**Recommended** Ferguson zone 2
Winter rest	**6-10 °C** 8-12 weeks
Diet	**Insects and worms/snails**
Kept	**Singly**

BREEDING

Reproduction	**Egg-laying**
Sexually mature	**18 months**
Clutch size	**5-15 eggs**
Incubation	**50-55 days** at 24-28 °C

PROTECTION AND PAPERWORK

CITES	**Not listed**
EU annex	**Not listed**
IUCN	**Least Concern (LC)**

About the species

Elgaria kingii is a heavily built lizard with short legs, a large head, powerful jaws and a long tail that breaks off easily. As in the other species of the genus, the back and belly are covered in large, stiff scales reinforced with bone, and a fold of small, granular scales along each side lets the body expand when the lizard has eaten a lot or when the female is carrying eggs. The species has 50-56 transverse rows of dorsal scales.

The body reaches up to 14 cm from snout to vent, and the original tail is more than twice as long as the body. The ground colour is tan or grey with dark, reddish-brown crossbands over the back and crisp black and white markings on the lips. Males have a broad head and a crisp pattern, while females are paler. Juveniles have distinct dark and light bands on the body and tail.

The species was described by John Edward Gray in 1838, and the species name honours Philip Parker King, a British naval officer and surveyor. Three subspecies are recognised, *E. k. kingii*, *E. k. nobilis* and *E. k. ferruginea*. It was formerly placed in the genus *Gerrhonotus*.

It is a lizard to watch, not to handle: if it is grabbed, it writhes, bites and empties its bowels, and it can drop its tail.

Distribution and habitat

Elgaria kingii lives in the south-western United States, in central and south-eastern Arizona and south-western New Mexico, and south through Mexico in Sonora, Chihuahua, Sinaloa, Durango, Zacatecas and Aguascalientes to Jalisco, Nayarit and Colima. The subspecies each have their own range: *E. k. nobilis* in south-eastern Arizona and south-western New Mexico, *E. k. kingii* in eastern Sonora and western Chihuahua and *E. k. ferruginea* in Aguascalientes, Durango and Sinaloa.

In Arizona the species lives from about 900 m to over 2,600 m above sea level, and it has been recorded up to about 2,700 m. It is not threatened.

> **Native range:** United States and Mexico.

HABITAT

The species is found in desert, grassland, scrub and forest, including along streams lined with broadleaf trees, and in valleys, canyons and on steep slopes. It often keeps to moist places with loose cover of fallen leaves and needles and hides under stones and logs and in rock crevices. It is active by day and at dusk and brumates during the cold part of the year.

The enclosure should provide moderate daytime temperatures, cool nights and a distinct cool period in winter.

Care

THE ENCLOSURE

Little is known about keeping *Elgaria kingii*. The care below is based on the climate of the range, the habitat and the size. Enclosure size, temperatures, brumation, age at sexual maturity and incubation period are borrowed from the closely related and better known *Elgaria multicarinata*. *Elgaria coerulea* and *Gerrhonotus liocephalus* have a similar way of life.

An adult needs an enclosure of at least 100 × 50 × 60 cm (length × width × height). Larger is better.

The substrate is 8-10 cm of unfertilised garden soil mixed with sand, so that it holds its shape and the lizard can dig down. Place half-buried cork tubes, bark, flat stones and boards on the substrate, and make crevices that the animal can squeeze into. A layer of fallen leaves gives extra cover. The species lives on the ground, so a low rock wall or a few branches are enough for climbing. All hides must be stable, so that they cannot collapse on the animal.

The enclosure must be well ventilated and have a lid that can be locked, because the species is strong and can push up loose lids. Keep the substrate dry to slightly moist, with a moist zone at one end. The animal is kept alone.

Read more: Incubating eggs Read more: Brumation and the seasons

TEMPERATURE

The daytime temperature in the enclosure is 18-28 °C with a basking spot of 30-33 °C measured on the surface. A clear difference between the warm and the cool end is more important than high heat. At night the temperature drops to 12-16 °C. Use a halogen spotlight over the basking spot controlled by a thermostat, and measure with thermometers at both ends and an infrared thermometer at the basking spot.

In winter the animal needs a cool period of 8-12 weeks at 6-10 °C with a short day. Only healthy animals in good condition should be brumated. Feeding is stopped, and the heat and day length are lowered gradually over 2 weeks, so that the gut is empty. If the animal is weakened, or its weight cannot be monitored, it is kept awake and fed throughout the winter.

Read more: Heat and temperature

HUMIDITY AND WATER

The humidity should be 40-60 %, highest in the moist zone and at night. The enclosure should have both a dry and a slightly moist side, so that the animal can choose.

Place a low, stable water bowl in the enclosure and change the water daily. Mist lightly once a day on the moist side, and let the enclosure dry out in between, so that mould does not develop. During shedding there must be a humid hide with moss or damp soil.

Read more: Humidity, misting and ventilation

LIGHTING AND UVB

The species is diurnal, so the enclosure needs a basking spot and UVB. A UVB tube of weak to moderate strength corresponding to Ferguson zone 2 over one half suits its way of life. The animal must be able to retreat from the light into shade.

The day length follows the season: about 12-14 hours in summer and 8-10 hours in the period before and after brumation. Replace the UVB tube according to the manufacturer's instructions, even if it still lights up.

Read more: Lighting and UVB

FEEDING

The species mainly eats insects such as grasshoppers, caterpillars and moths, and it also takes scorpions. Movement triggers the capture.

In the enclosure, feed crickets, grasshoppers, cockroaches, mealworms and snails. Adults are fed 2-3 times a week, young animals more often. Offer what is eaten in a short time, and remove the leftovers.

Dust the feeder insects with calcium without D3 at every second or third feeding, and give a multivitamin 1-2 times a month. Never feed wild-caught insects from places that are sprayed.

Read more: Feeder animals: keeping and breeding Read more: Calcium, vitamins and supplements Read more: Buying animals: captive-bred, wild-caught and transport

BEHAVIOUR AND HANDLING

The species hides under cover, but is also out in the open in the morning and evening. It is not an animal for handling. If it is grabbed, it bites hard and empties its bowels, and the tail is easily dropped. A bite must be washed and disinfected. Use feeding tongs, and let the animal take the food itself.

The animal is kept alone. The genus eats smaller lizards, so young and smaller animals are at risk in a shared enclosure, and adults are put together only for mating, under supervision. Stress shows as lack of appetite, the animal hiding all the time and loss of the tail; calm and many hides prevent it.

Breeding

SEXUAL MATURITY AND SEXING

The male has a broader head and a crisper pattern than the female, which is paler, but reliable sexing requires a vet. Sexual maturity is reached at about 18 months.

MATING

In the wild the species presumably mates in September and October. The female can store sperm, and embryonic development is arrested during the winter months, so the eggs are not laid until late spring or summer. In the genus the male grips the female's head in his mouth and holds on until she is ready. The animals are therefore put together in late summer or autumn before brumation, only under supervision, and separated again afterwards.

EGG-LAYING AND CLUTCHES

The species lays eggs. A clutch contains up to 15 eggs and is laid in late spring or summer, and the female may stay with the eggs and tend them. The number of clutches per year is not documented. The egg-laying site in the enclosure is a box of moist soil, sand and moss, at least 20 cm deep. Remove the eggs for incubation, so that they are not damaged.

INCUBATION

The eggs are incubated in a closed box with moist vermiculite or perlite at 24-28 °C for about 50-55 days. The eggs must lie moist, but not in water, and the box is aired briefly once a week.

REARING THE YOUNG

The young are kept apart from adults and preferably each on its own. Give them small feeder animals such as fruit flies and small crickets every day or every other day, dusted with calcium, and an enclosure with many hides, a slightly moist substrate and a small basking spot. Size, growth and age at separation are not documented.

Health and common mistakes

Almost nothing is known about *Elgaria kingii* in captivity, but the species can live for more than 15 years. The most common problems are borrowed from the genus:

- stress and lack of appetite, especially in new animals and animals that are handled
- loss of the tail through handling or fights
- metabolic bone disease from a lack of UVB and calcium
- obesity from too much food and too little movement
- ticks and intestinal worms in wild-caught animals; have a faecal sample examined
- bites and wounds if several animals are kept together
- overheating: the genus tolerates prolonged heat poorly

Contact a vet with reptile experience in the event of persistent lack of appetite, weight loss, swellings, ticks, wounds, nasal discharge or blood in the faeces.

Read more: Common diseases and signs of illness

Always ask someone who knows

This guide is a good place to start, but it cannot replace experience. Animals differ, and much of what matters most is learned from people who have kept the species for years. Talk to a breeder, an experienced keeper or a vet who knows reptiles and amphibians before you get the animal - and again if anything looks wrong.